FIG. 1

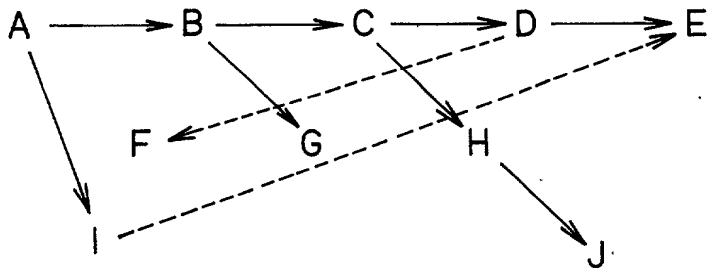

A
B
C
D
E
F
G
H
I
J

FIG. 2

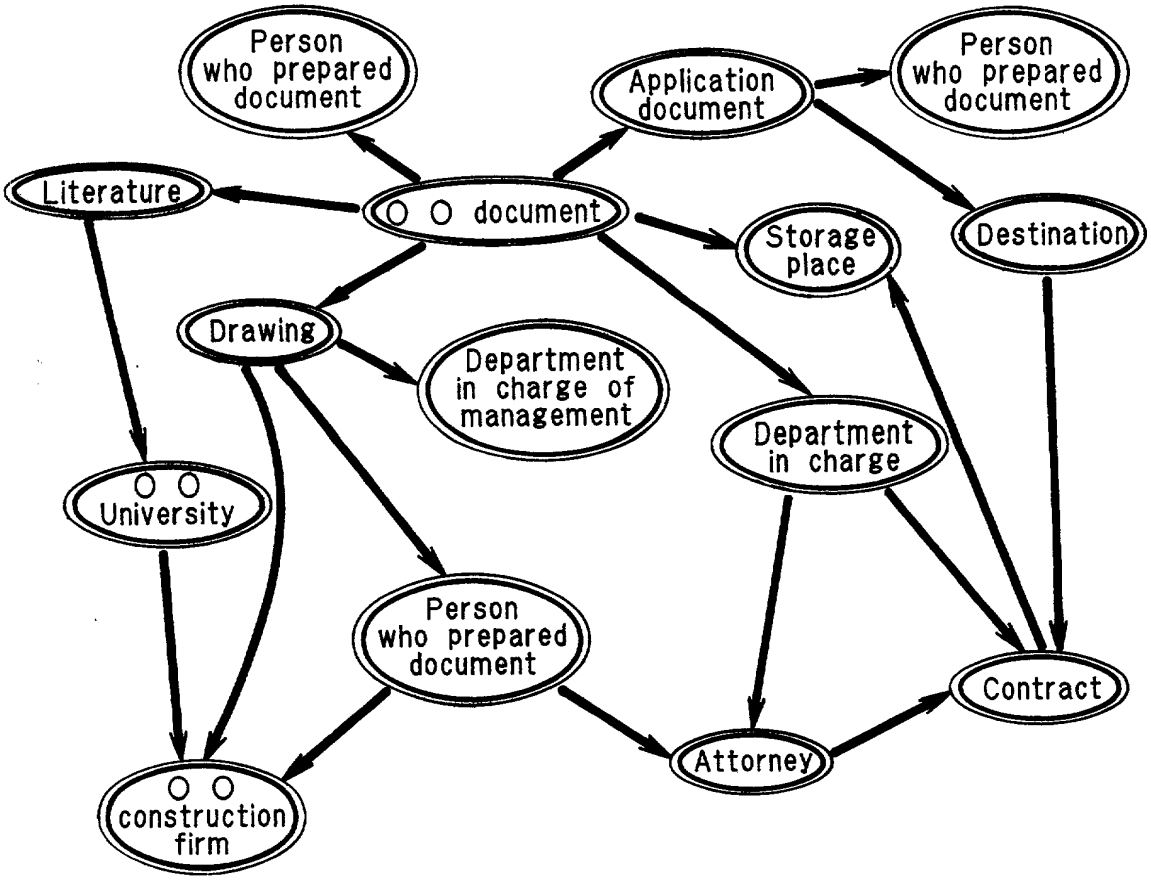

Person who prepared document
Application document
Person who prepared document
Literature
O O document
Storage place
Destination
Drawing
Department in charge of management
Department in charge
O O University
Person who prepared document
Contract
Attorney
O O construction firm

FIG. 3

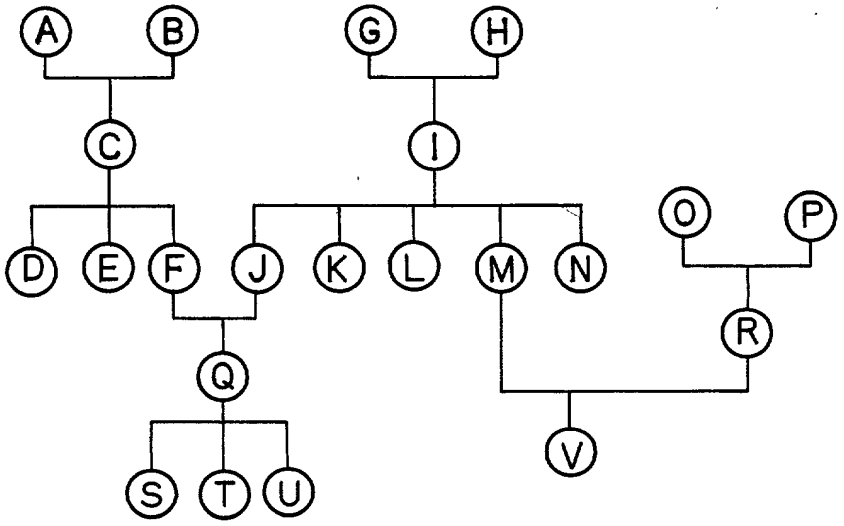


FIG. 4

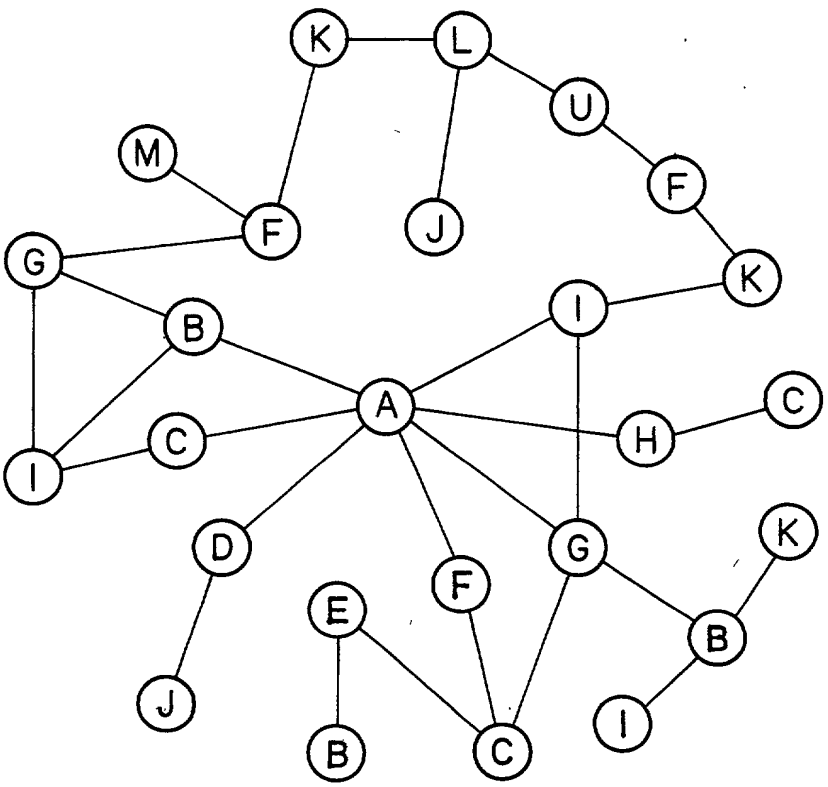


FIG. 5

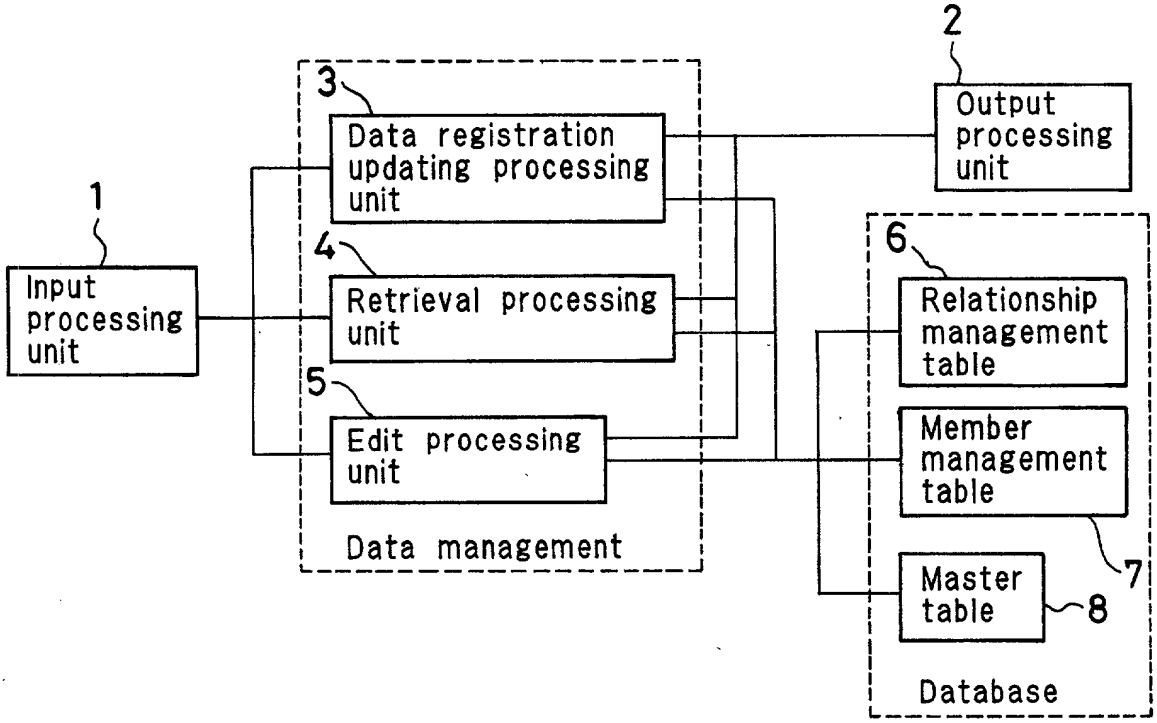

1
Input processing unit
2
Output processing unit
3
Data registration updating processing unit
4
Retrieval processing unit
5
Edit processing unit
Data management
6
Relationship management table
Member management table
7
Master table
8
Database

FIG. 6

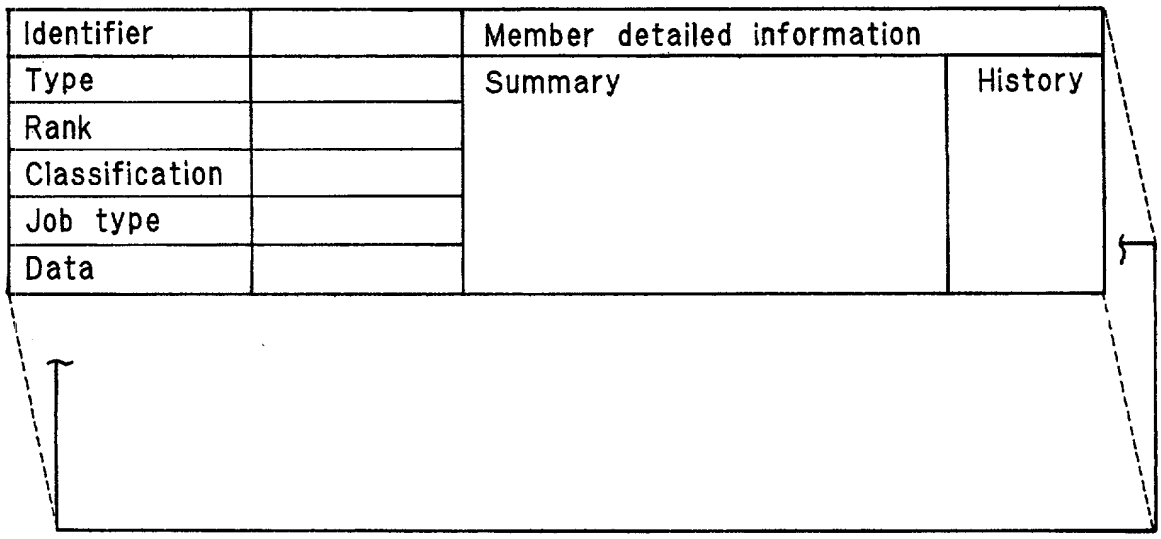

Identifier
Type
Rank
Classification
Job type
Data
Member detailed information
Summary
History

FIG. 7

Identifier (parent)	Identifier (child)	Relationship classification

FIG. 8(A) FIG. 8(B) FIG. 8(C)

Table for each type

Member type
Person
Company
Document

Rank table

Rank	Priority rank
Most important	High
Important	Intermediate
Customer A rank	Low

Classification table

Lage classification	Medium classification	Small classification
Tokyo	Shibuya-ku	Ebisu
Head office	General Affairs Dept.	General Affairs Dept.

FIG. 8(D) FIG. 8(E)

Job type table

Manufacturer
Information service provider
Self-governig body

Relationship classification table

Relationship classification	Priority rank
Superior staff	High
Subordinate staff	Medium

FIG. 9

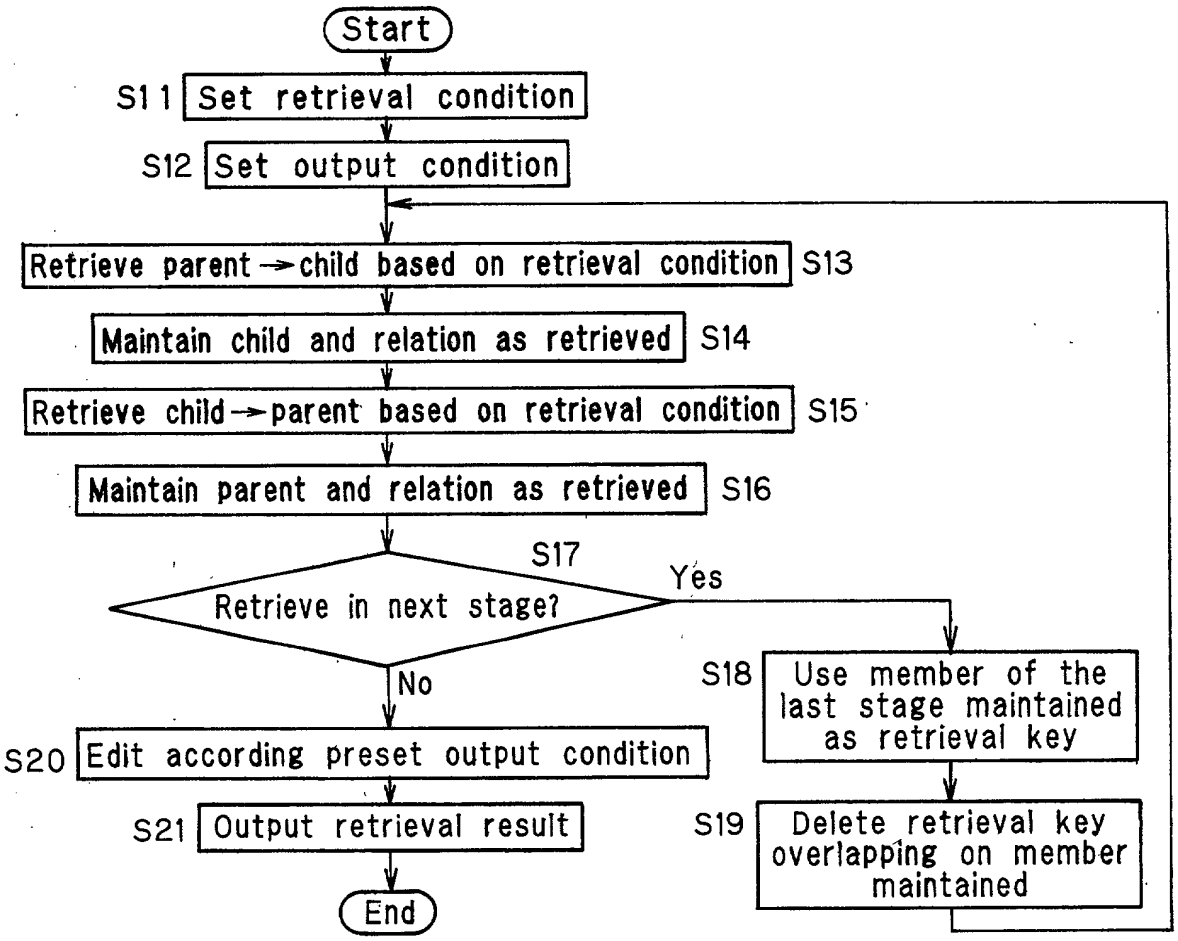


FIG. 10(A)

Member name (ID)	
Type	
Classification	
Rank	
Job type	
Scope of retrieval	

FIG. 10(B)

Parent	
Child	
Color	Parent Child
Relationship	
Mode	
Pattern	

FIG. 11

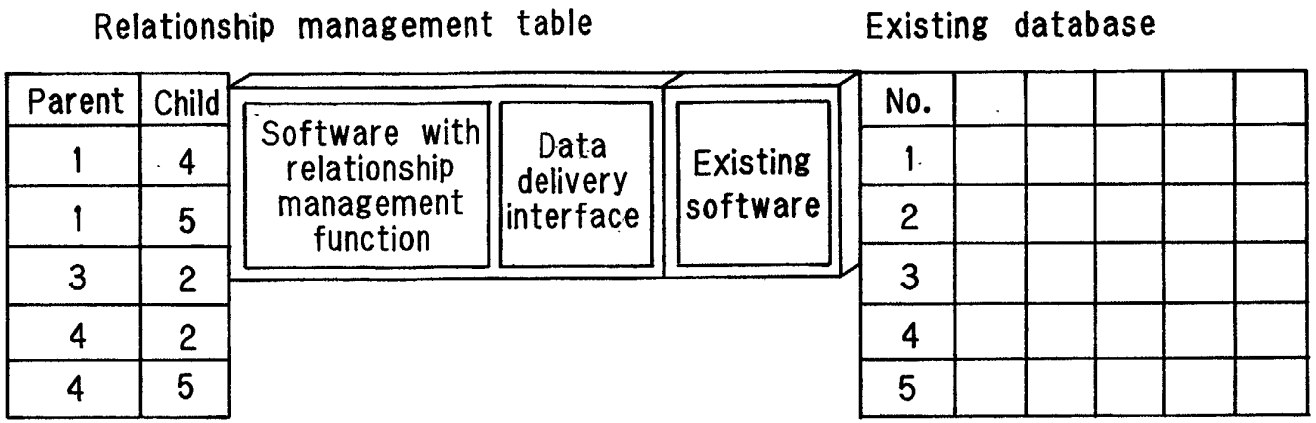

Relationship management table
Existing database
Parent
Child
1
4
1
5
3
2
4
2
4
5
Software with relationship management function
Data delivery interface
Existing software
No.
1
2
3
4
5

FIG. 12

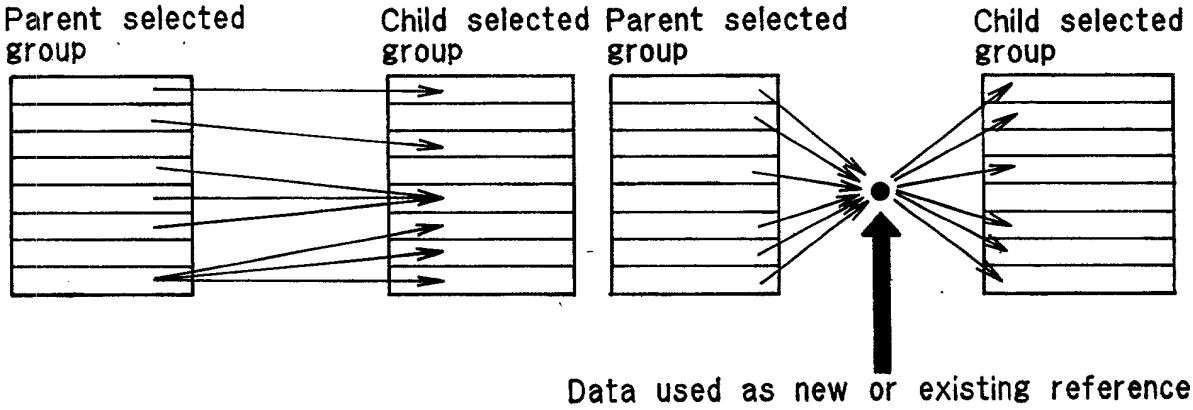
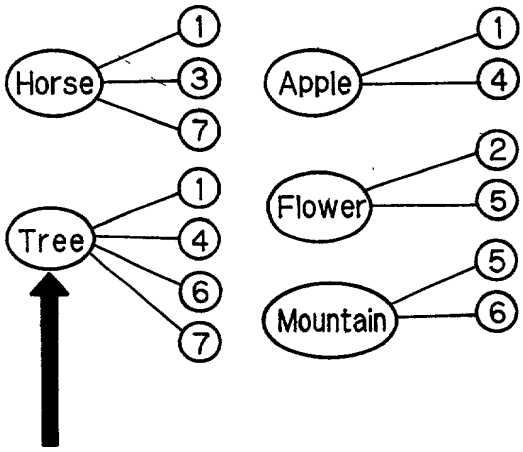


FIG. 13

	Category 1	Category 2	Category 3	Category n
1	Horse	Apple	Tree	
2	Flower			
3		Horse		
4	Apple	Tree		
5	Mountain		Flower	
6	Tree	Mountain		
7	Tree			Horse



Data used as new or existing reference

FIG. 14

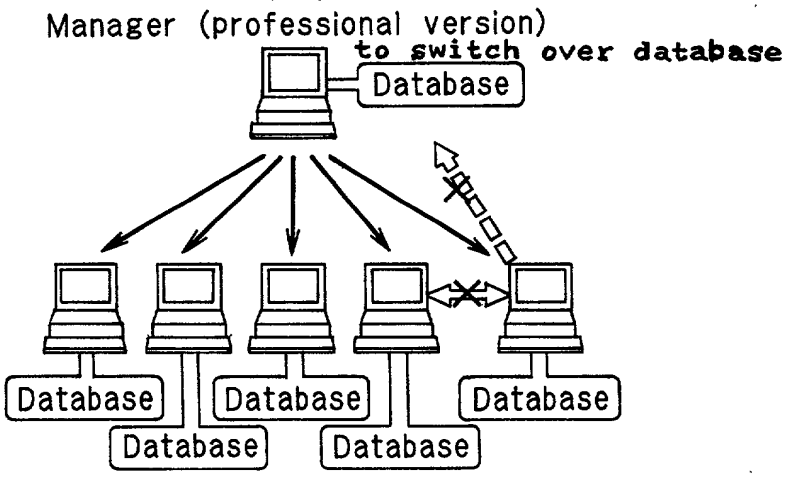


FIG. 15(A)

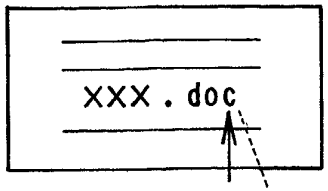
Table calculation software

A3		Nagasaki	
	A	B	C
1	Fukuoka	123	1
2	Saga	124	23
3	Nagasaki	125	45
4	Ooita	126	67
5	Kumamoto	127	89
6	Miyazaki	128	111
7	Kagosima	129	133

Any sheet or selected cell

FIG. 15(B)

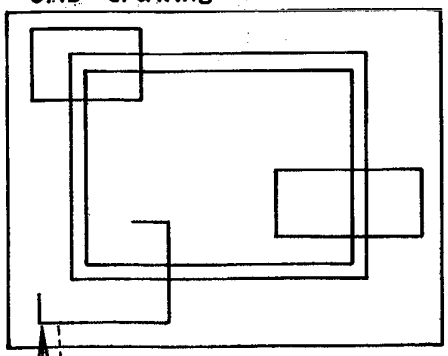
File management software



The entire file

FIG. 15(C)

CAD drawing



Any object in drawing

FIG. 15(D)

The entire image or a portion selected as desired

Image

FIG. 15(E)

Relationship management table

Parent	Child
1	4
1	5
3	2
4	2
4	5

FIG. 15(F)

Member management table

Identifier	Object or attribute or attribute information
1	
2	
3	
4	
5	

FIG. 16(A)

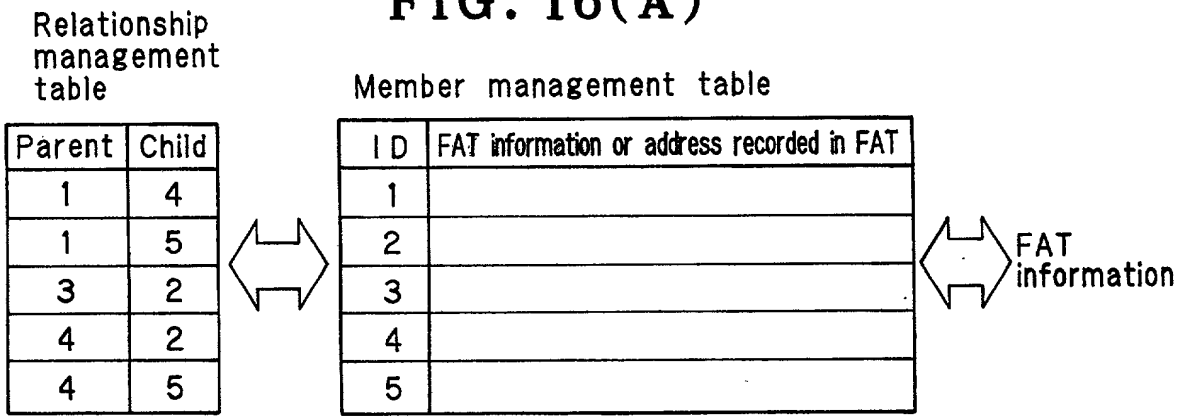


FIG. 16(B)

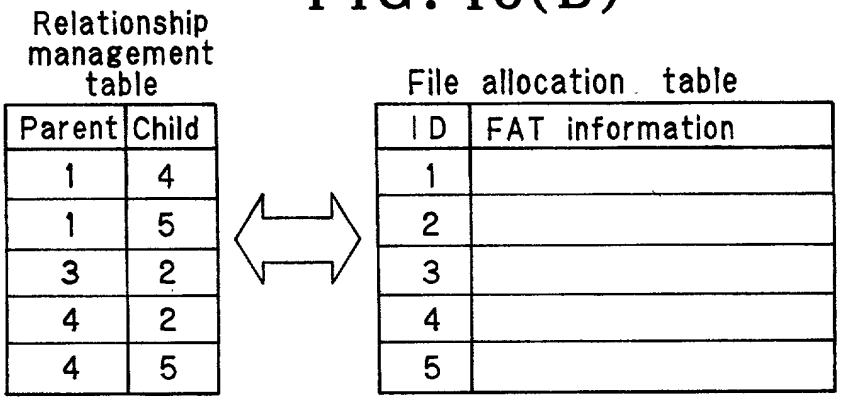


FIG. 16(C)

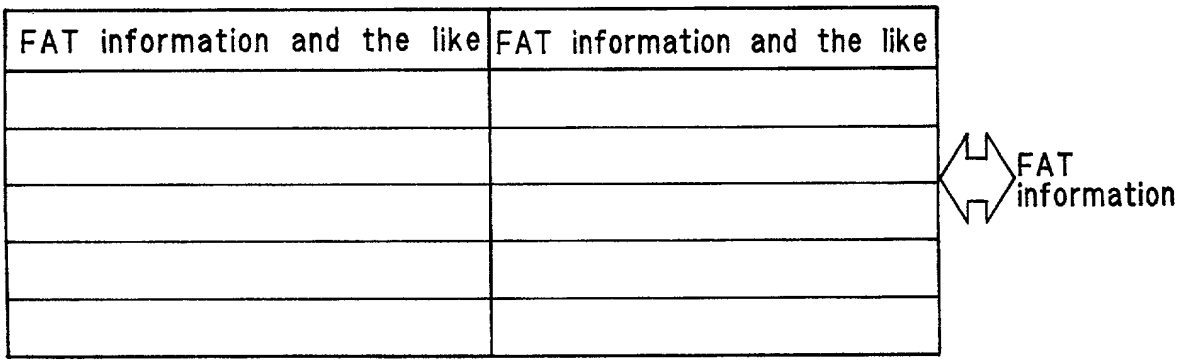


FIG. 17(A)

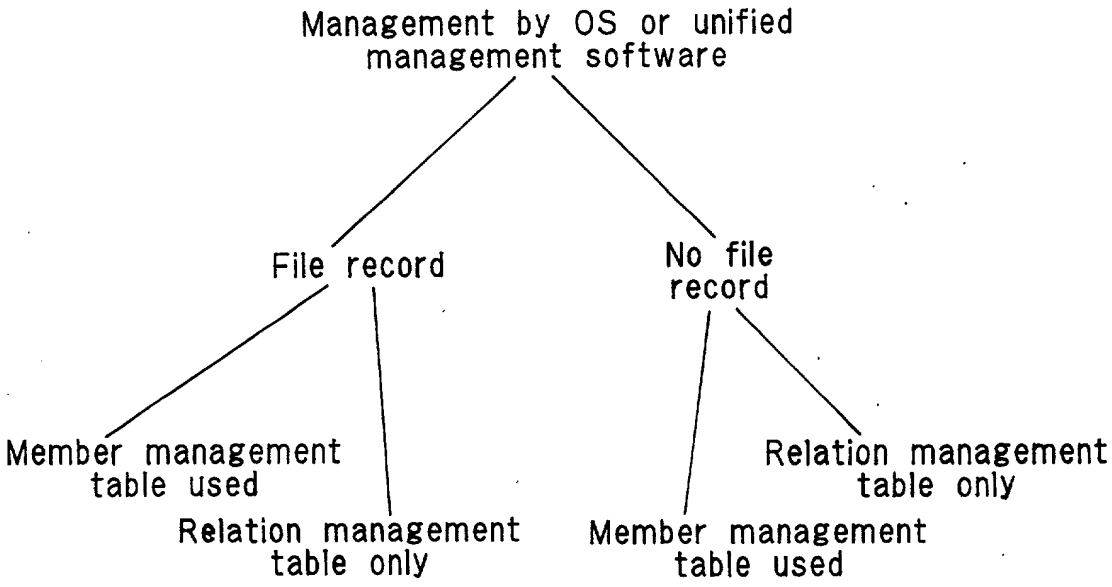


FIG. 17(B)

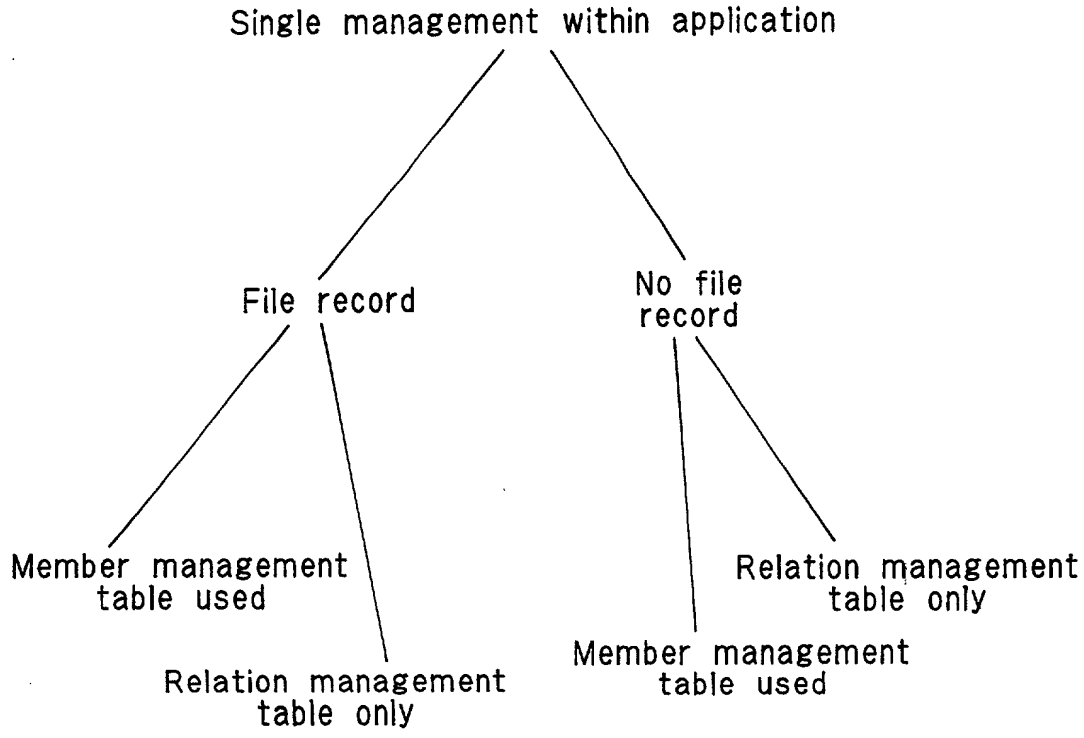


FIG. 18

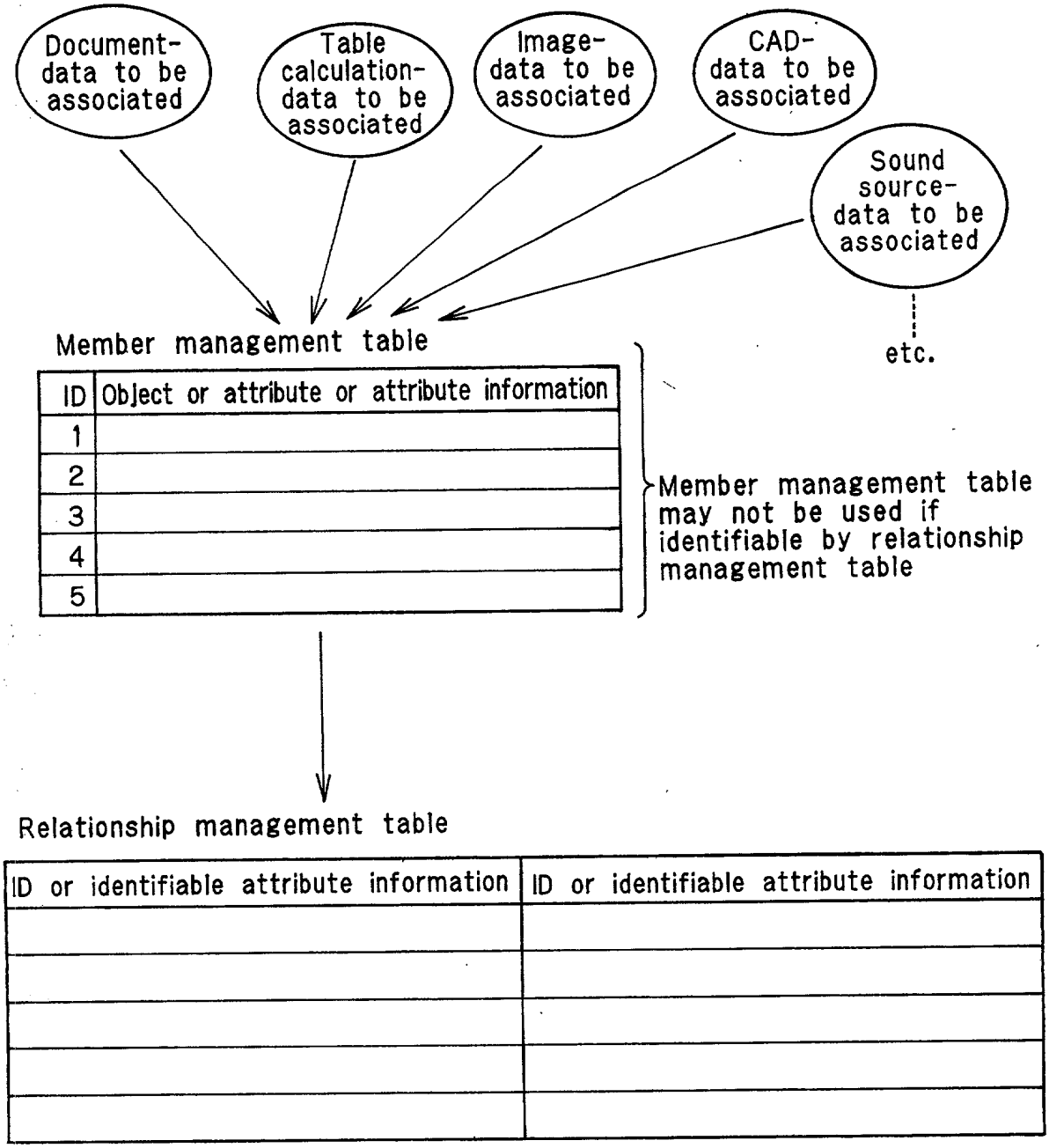

Document-data to be associated
Table calculation-data to be associated
Image-data to be associated
CAD-data to be associated
Sound source-data to be associated
etc.
Member management table
ID
Object or attribute or attribute information
1
2
3
4
5
Member management table may not be used if identifiable by relationship management table
Relationship management table
ID or identifiable attribute information
ID or identifiable attribute information

FIG. 19(A)

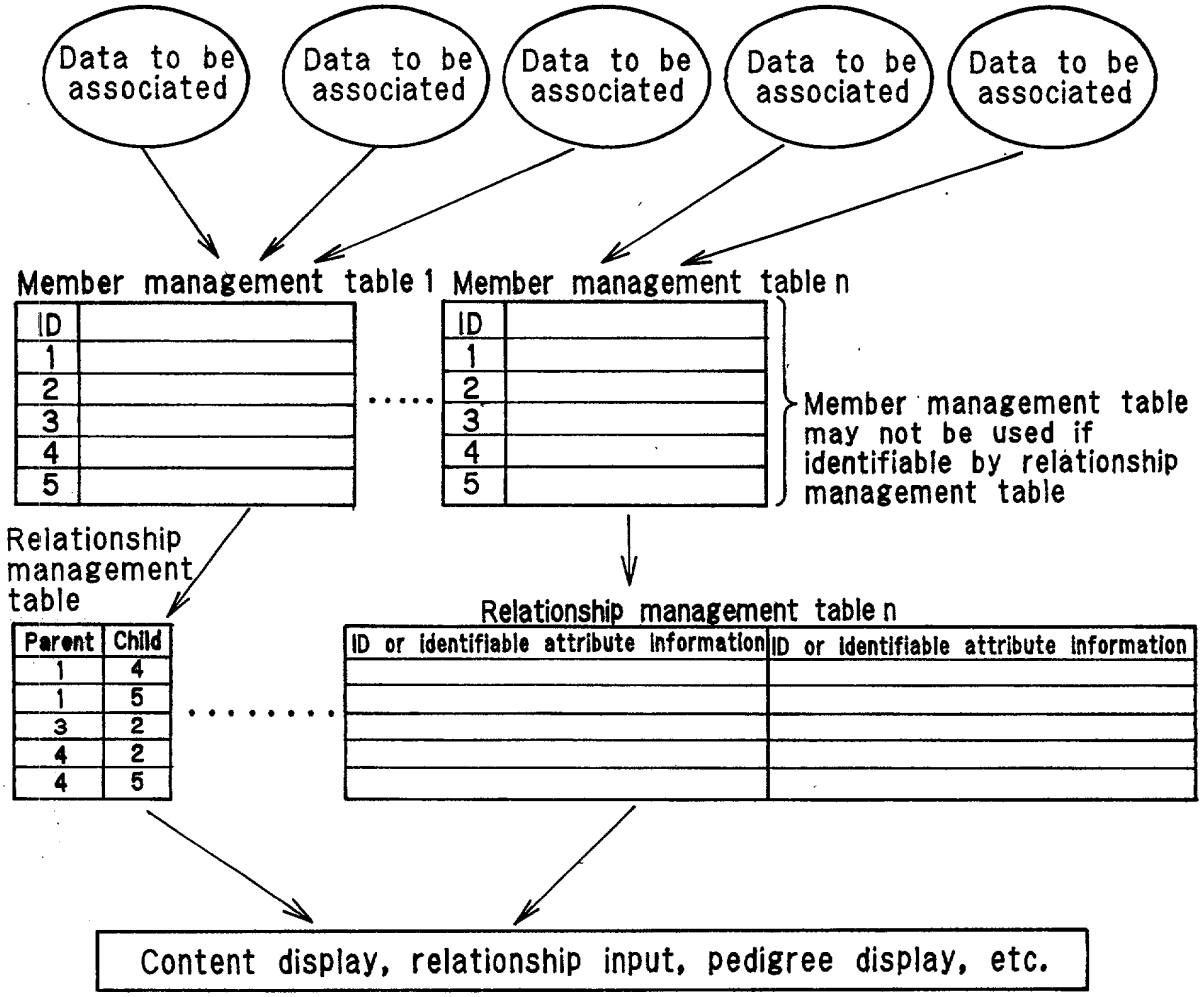


FIG. 19(B)

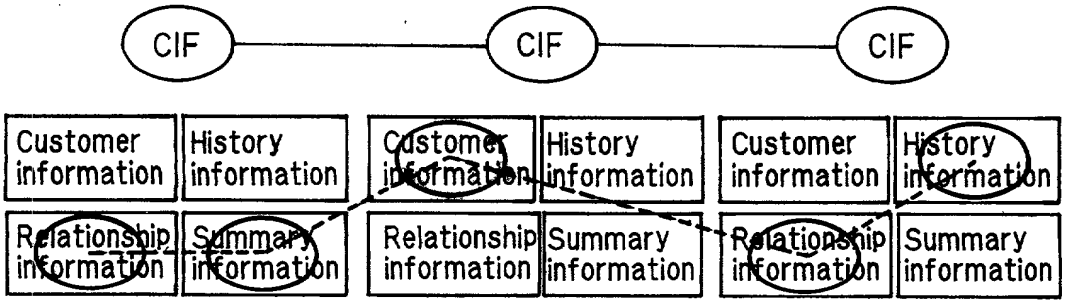


FIG. 20

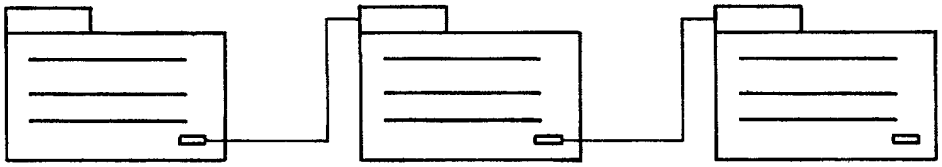
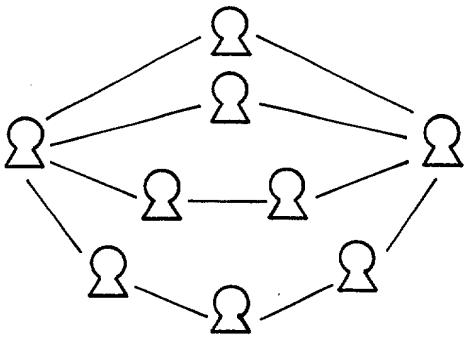


FIG. 42



In the case shown at left

- Relative of the second degree (1)
- Relative of the second degree (2)
- Relative of the third degree (1)
- Relative of the fourth degree (1)

FIG. 21

In case members are aligned in the order of parents

Parent	Child	Relationship
A	B	Friend
A	D	Family member
C	A	Colleague
D	B	Fishing friend
D	E	Fishing friend

In case members are aligned in the order of children

Parent	Child	Relationship
C	A	Colleague
A	B	Friend
D	B	Fishing friend
A	D	Family member
D	E	Fishing friend

FIG. 22

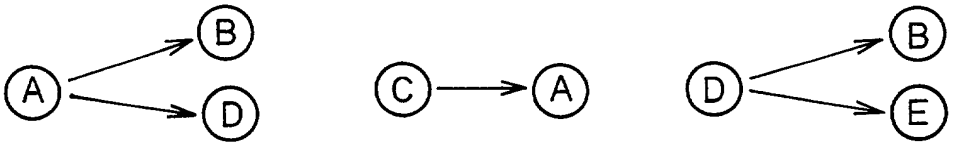


FIG. 23

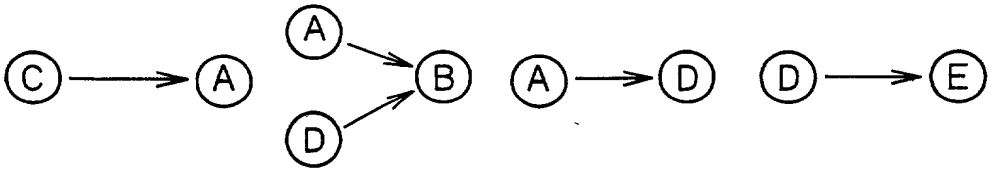


FIG. 24

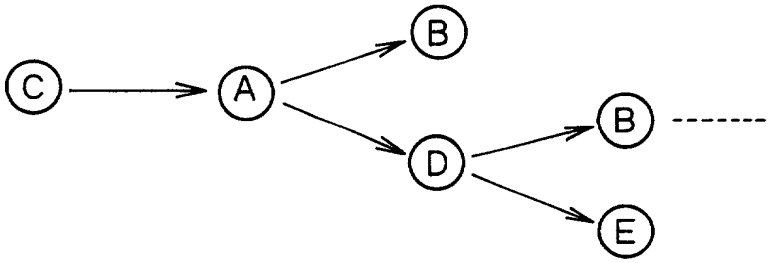


FIG. 25

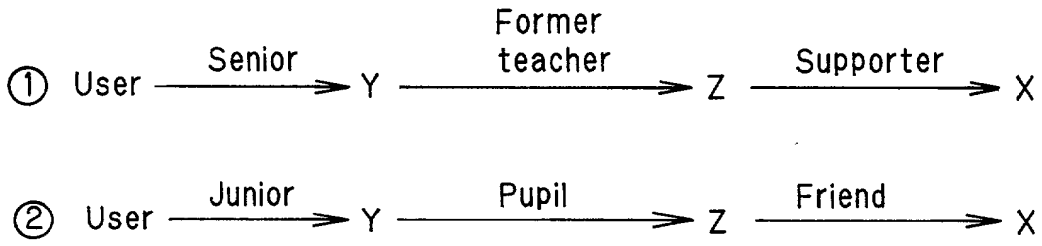

① User
Senior
Y
Former teacher
Z
Supporter
X
② User
Junior
Y
Pupil
Z
Friend
X

FIG. 26

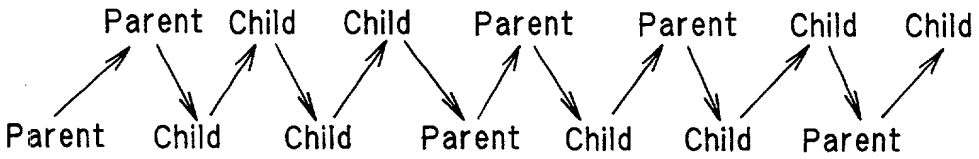

Parent
Child
Child
Parent
Child
Child
Parent
Parent
Child
Child
Parent
Child
Child
Parent
Child
Child
Parent

FIG. 27

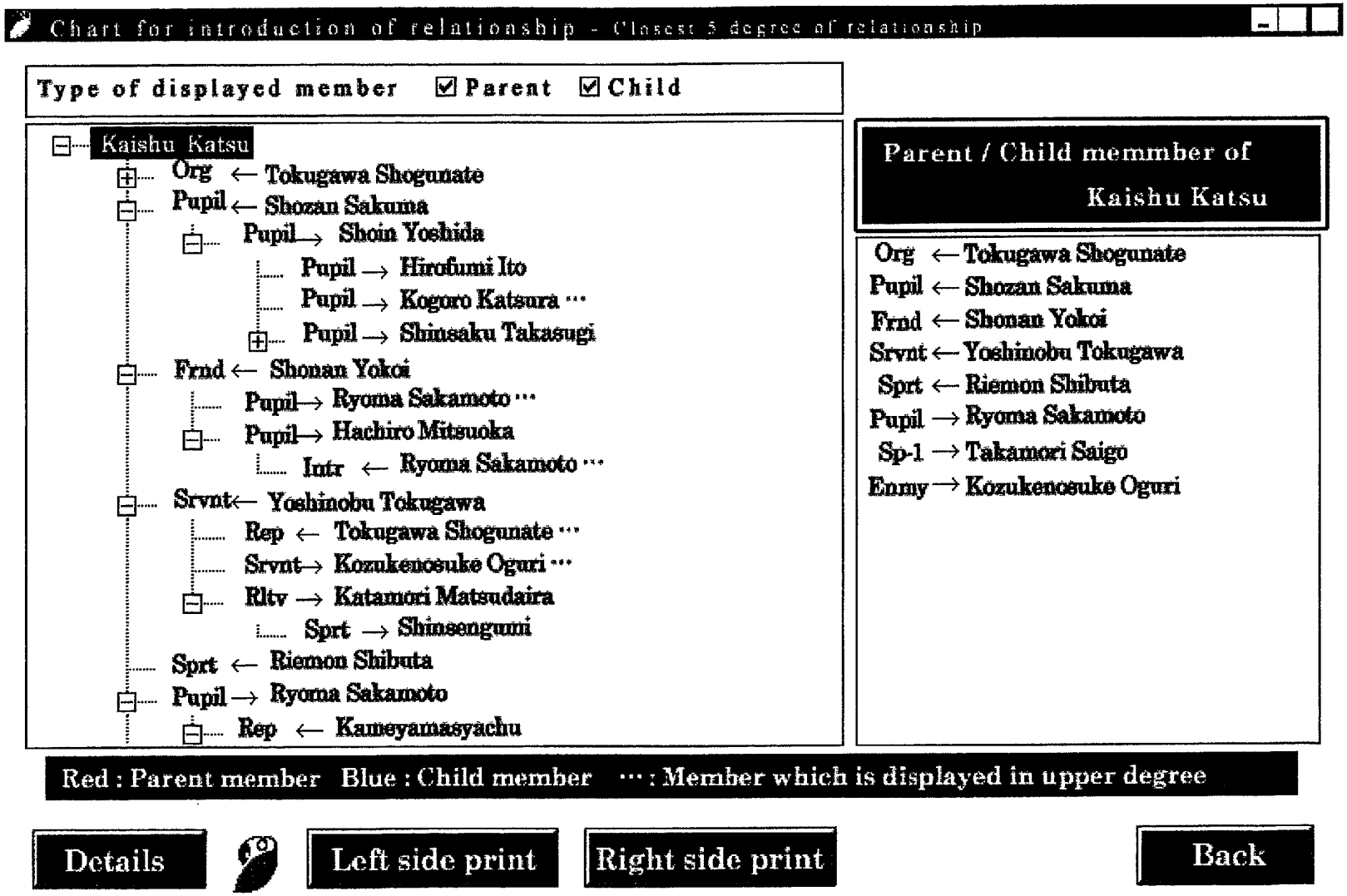


Chart for introduction of relationship - Closest 5 degree of relationship
Type of displayed member
Parent
Child
Kaishu Katsu
Org ← Tokugawa Shogunate
Pupil ← Shozan Sakuma
Pupil → Shoin Yoshida
Pupil → Hirofumi Ito
Pupil → Kogoro Katsura ···
Pupil → Shinsaku Takasugi
Frnd ← Shonan Yokoi
Pupil → Ryoma Sakamoto ···
Pupil → Hachiro Mitsuoka
Intr ← Ryoma Sakamoto ···
Srvnt ← Yoshinobu Tokugawa
Rep ← Tokugawa Shogunate ···
Srvnt → Kozukenosuke Oguri ···
Rltv → Katamori Matsudaira
Sprt → Shinsengumi
Sprt ← Riemon Shibuta
Pupil → Ryoma Sakamoto
Rep ← Kameyamasyachu
Parent / Child memmber of Kaishu Katsu
Org ← Tokugawa Shogunate
Pupil ← Shozan Sakuma
Frnd ← Shonan Yokoi
Srvnt ← Yoshinobu Tokugawa
Sprt ← Riemon Shibuta
Pupil → Ryoma Sakamoto
Sp-1 → Takamori Saigo
Enmy → Kozukenosuke Oguri
Red : Parent member Blue : Child member ··· : Member which is displayed in upper degree
Details
Left side print
Right side print
Back

FIG. 28

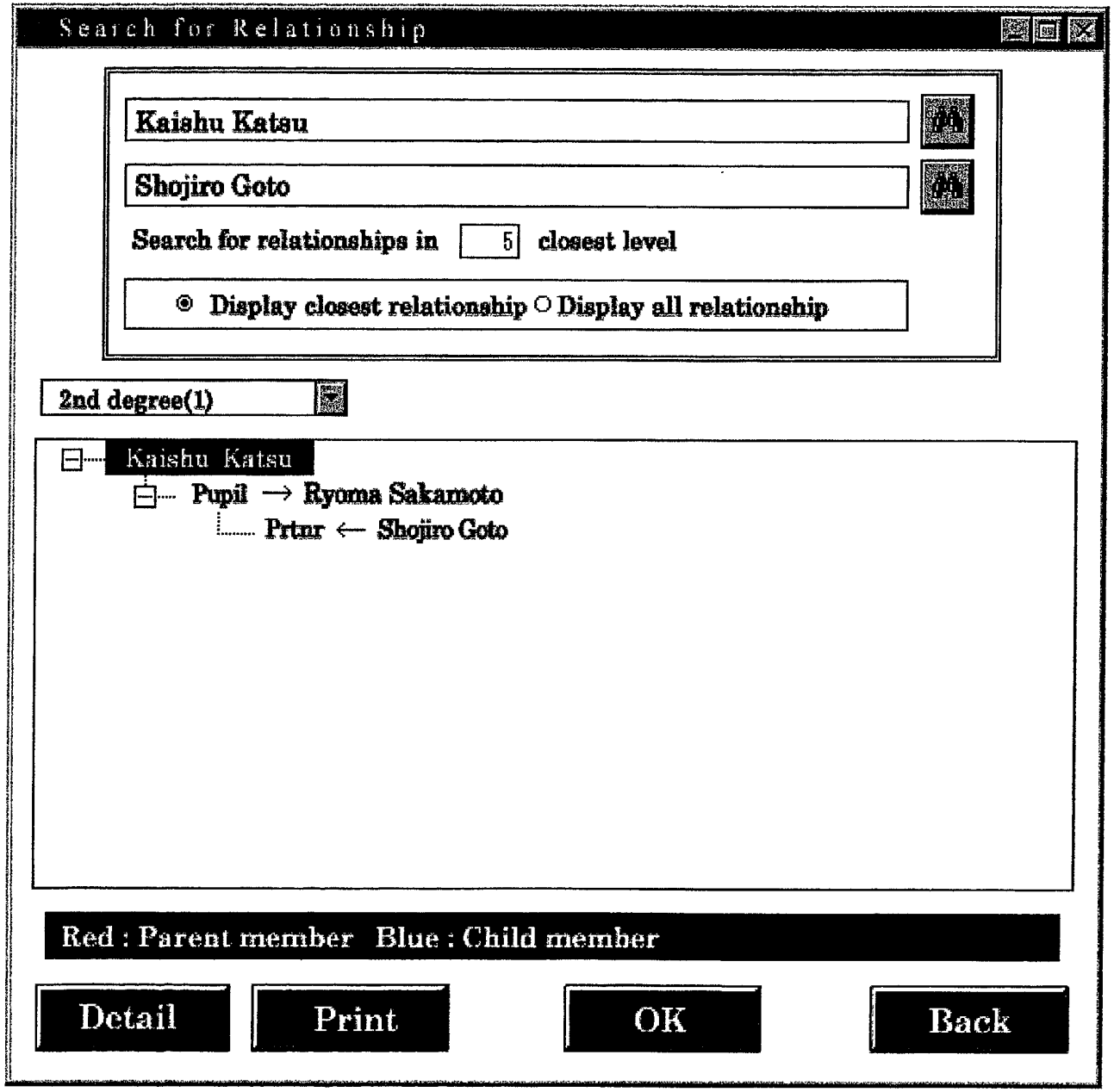

Search for Relationship
Kaishu Katsu
Shojiro Goto
Search for relationships in 5 closest level
Display closest relationship
Display all relationship
2nd degree(1)
Kaishu Katsu
Pupil → Ryoma Sakamoto
Prtnr ← Shojiro Goto
Red : Parent member Blue : Child member
Detail
Print
OK
Back

FIG. 29

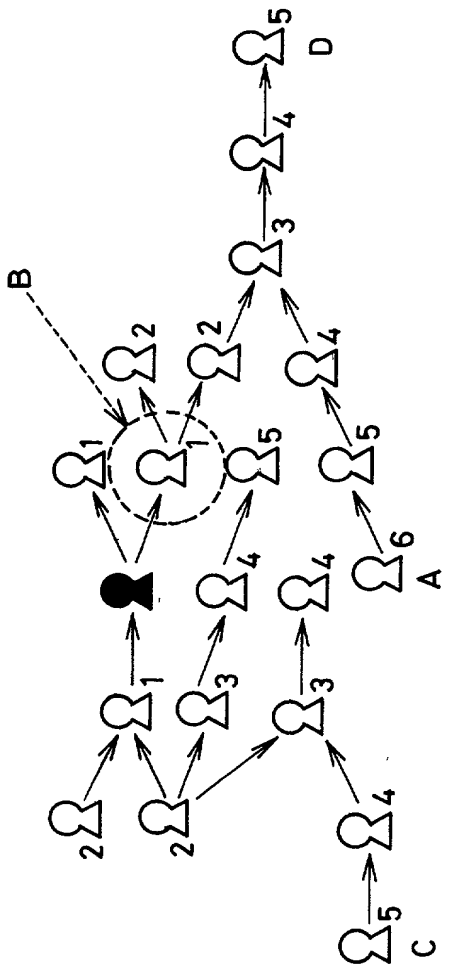


FIG. 30

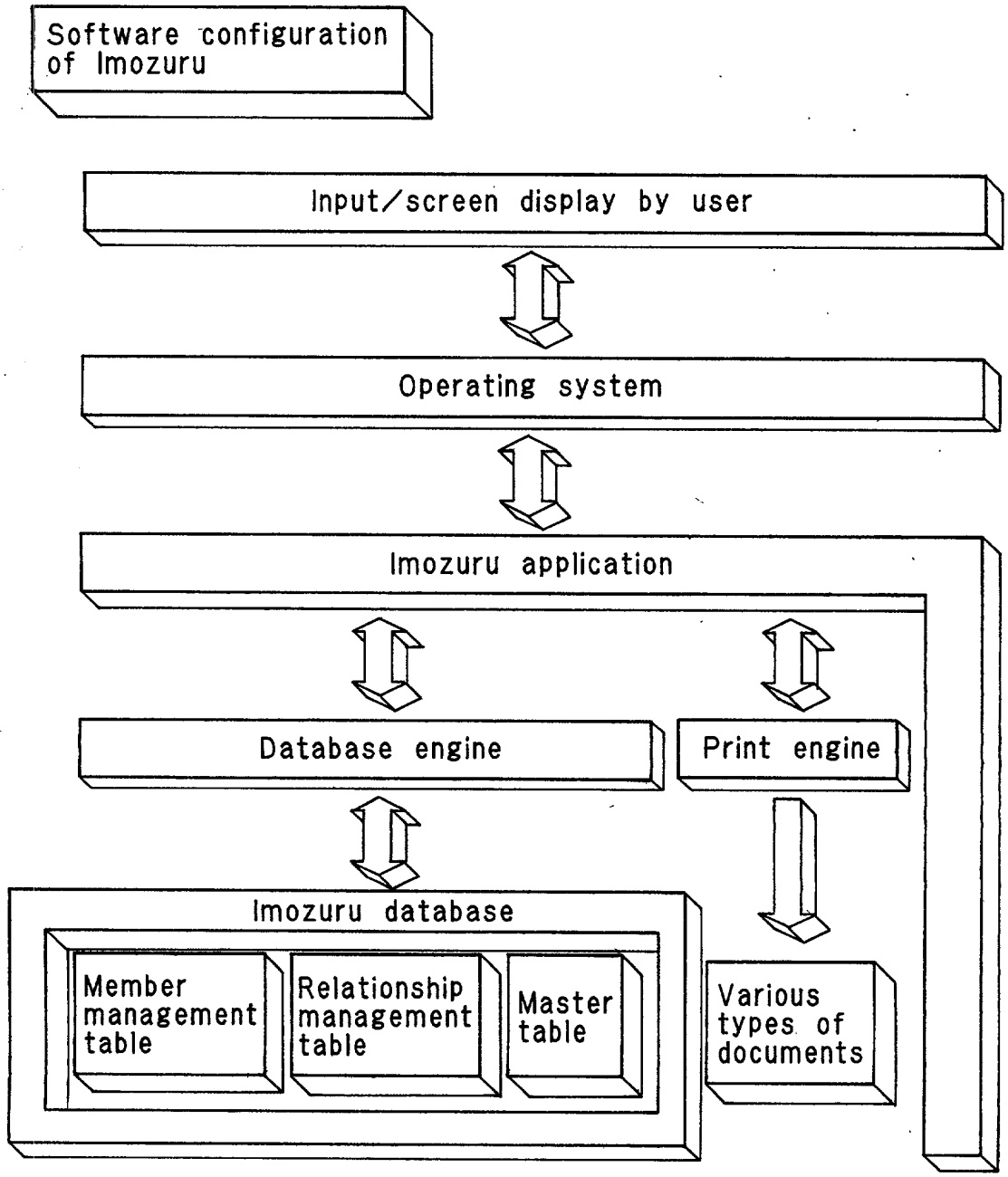
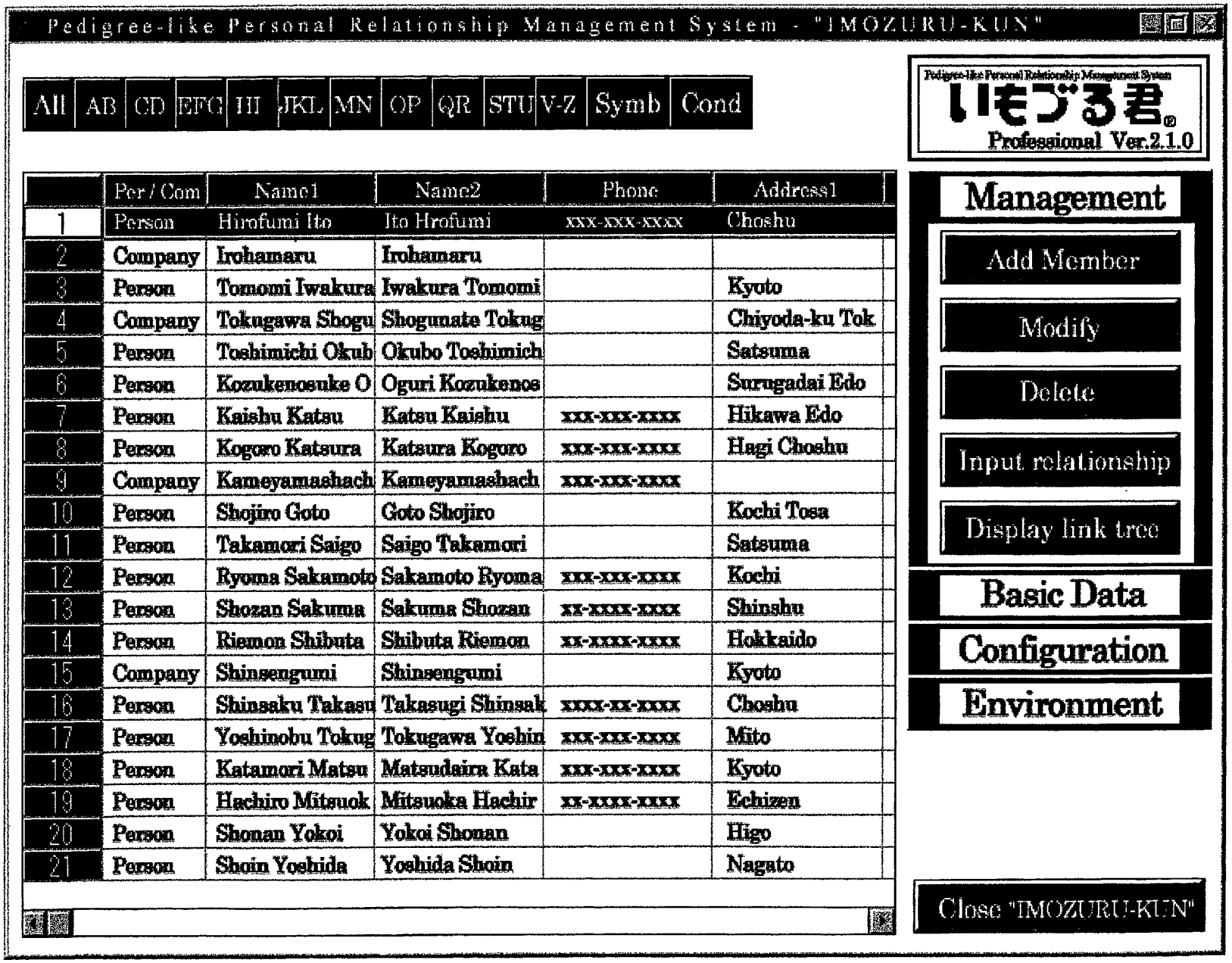

Software configuration of Imozuru
Input/screen display by user
Operating system
Imozuru application
Database engine
Print engine
Imozuru database
Member management table
Relationship management table
Master table
Various types of documents

FIG. 31



	Per / Com	Name1	Name2	Phone	Address1
1	Person	Hirofumi Ito	Ito Hrofumi	xxx-xxx-xxxx	Choshu
2	Company	Irohamaru	Irohamaru		
3	Person	Tomomi Iwakura	Iwakura Tomomi		Kyoto
4	Company	Tokugawa Shogu	Shogunate Tokug		Chiyoda-ku Tok
5	Person	Toshimichi Okub	Okubo Toshimich		Satsuma
6	Person	Kozukenosuke O	Oguri Kozukenos		Surugadai Edo
7	Person	Kaishu Katsu	Katsu Kaishu	xxx-xxx-xxxx	Hikawa Edo
8	Person	Kogoro Katsura	Katsura Kogoro	xxx-xxx-xxxx	Hagi Choshu
9	Company	Kameyamashach	Kameyamashach	xxx-xxx-xxxx	
10	Person	Shojiro Goto	Goto Shojiro		Kochi Tosa
11	Person	Takamori Saigo	Saigo Takamori		Satsuma
12	Person	Ryoma Sakamoto	Sakamoto Ryoma	xxx-xxx-xxxx	Kochi
13	Person	Shozan Sakuma	Sakuma Shozan	xx-xxxx-xxxx	Shinshu
14	Person	Riemon Shibuta	Shibuta Riemon	xx-xxxx-xxxx	Hokkaido
15	Company	Shinsengumi	Shinsengumi		Kyoto
16	Person	Shinsaku Takasu	Takasugi Shinsak	xxxx-xx-xxxx	Choshu
17	Person	Yoshinobu Tokug	Tokugawa Yoshin	xxx-xxx-xxxx	Mito
18	Person	Katamori Matsu	Matsudaira Kata	xxx-xxx-xxxx	Kyoto
19	Person	Hachiro Mitsuok	Mitsuoka Hachir	xx-xxxx-xxxx	Echizen
20	Person	Shonan Yokoi	Yokoi Shonan		Higo
21	Person	Shoin Yoshida	Yoshida Shoin		Nagato

FIG. 32

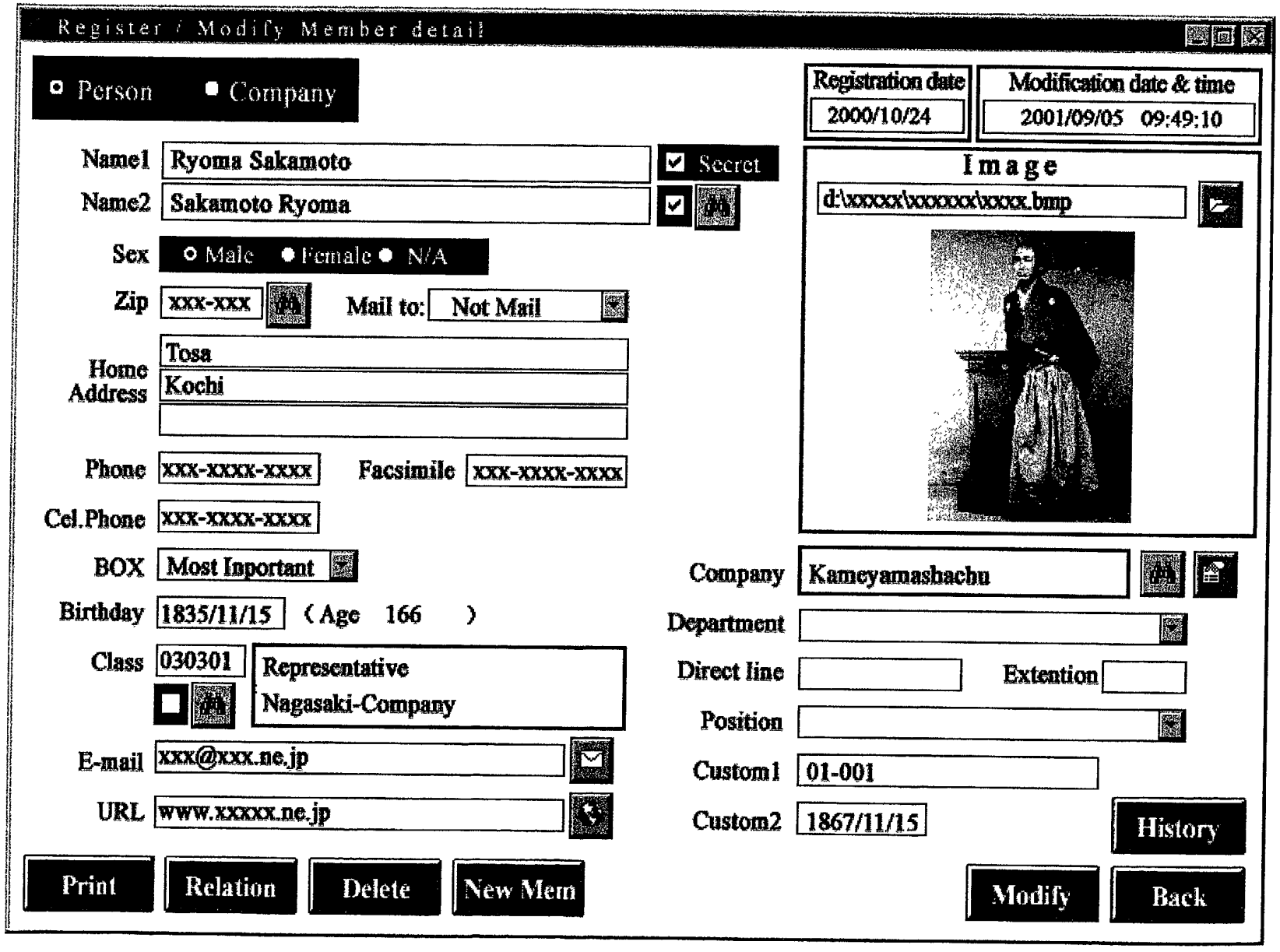

Register / Modify Member detail
Person
Company
Registration date
2000/10/24
Modification date & time
2001/09/05 09:49:10
Name1
Ryoma Sakamoto
Secret
Name2
Sakamoto Ryoma
Image
d:\xxxxx\xxxxxx\xxxx.bmp
Sex
Male
Female
N/A
Zip
xxx-xxx
Mail to:
Not Mail
Home Address
Tosa
Kochi
Phone
xxx-xxxx-xxxx
Facsimile
xxx-xxxx-xxxx
Cel.Phone
xxx-xxxx-xxxx
BOX
Most Important
Company
Kameyamashachu
Birthday
1835/11/15
(Age 166)
Department
Class
030301
Representative
Nagasaki-Company
Direct line
Extention
Position
E-mail
xxx@xxx.ne.jp
Custom1
01-001
URL
www.xxxxx.ne.jp
Custom2
1867/11/15
History
Print
Relation
Delete
New Mem
Modify
Back

FIG. 33

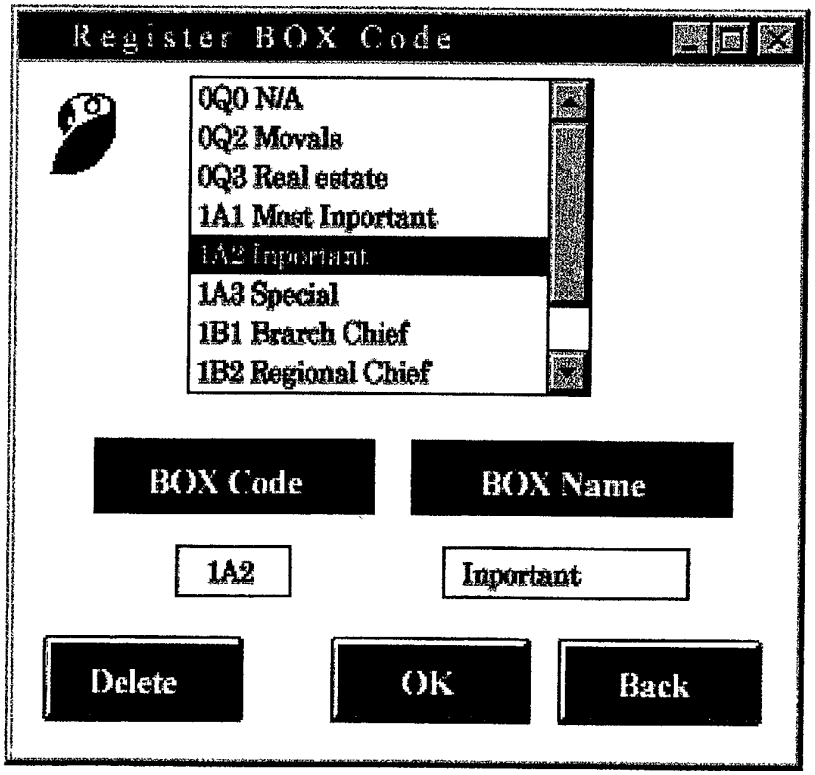

Register BOX Code
0Q0 N/A
0Q2 Movals
0Q3 Real estate
1A1 Most Inportant
1A2 Inportant
1A3 Special
1B1 Branch Chief
1B2 Regional Chief
BOX Code
BOX Name
1A2
Important
Delete
OK
Back

FIG. 34

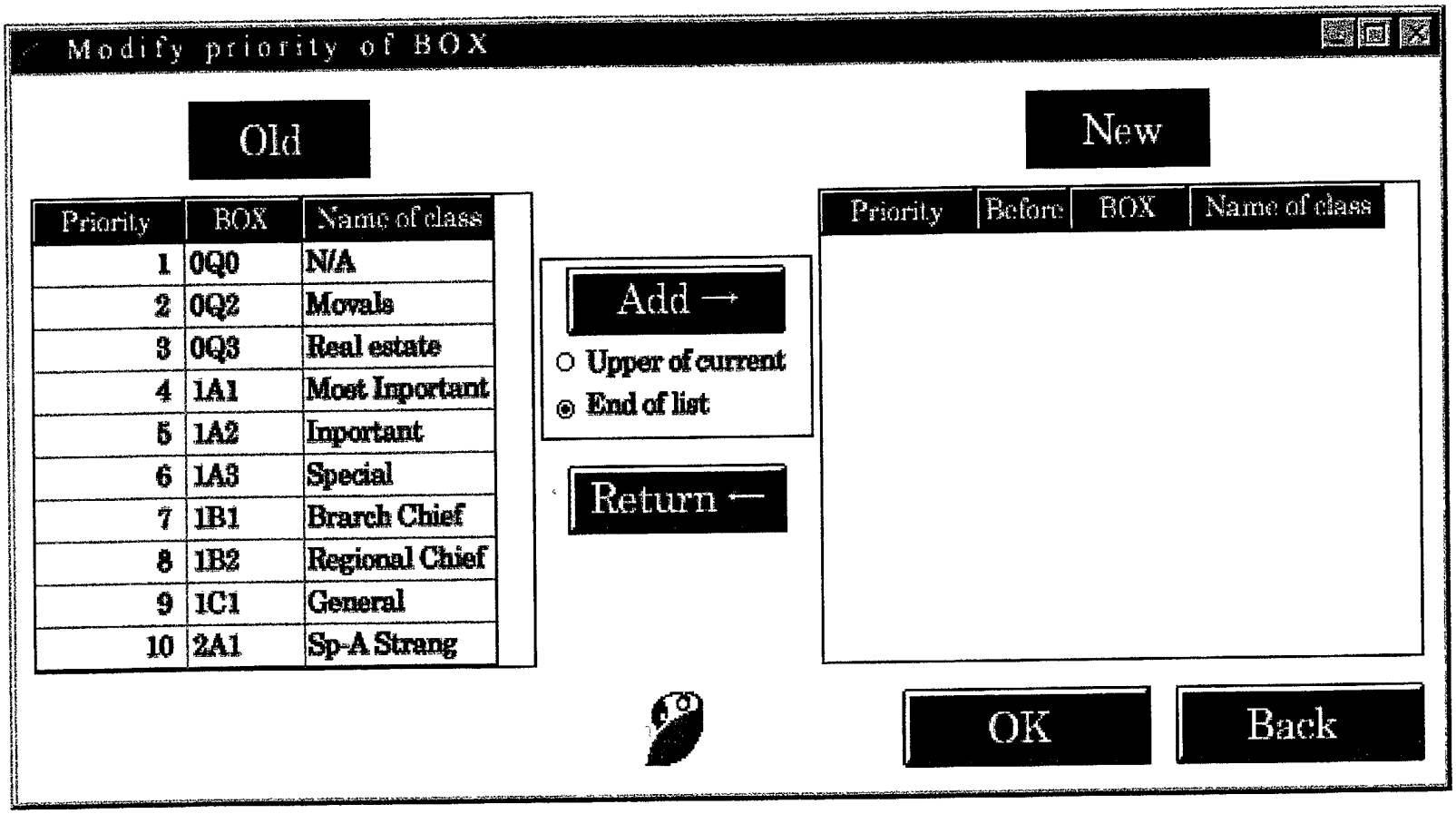

Modify priority of BOX
Old
Priority
BOX
Name of class
1 0Q0 N/A
2 0Q2 Movals
3 0Q3 Real estate
4 1A1 Most Important
5 1A2 Important
6 1A3 Special
7 1B1 Brarch Chief
8 1B2 Regional Chief
9 1C1 General
10 2A1 Sp-A Strang
Add →
Upper of current
End of list
Return ←
New
Priority
Before
BOX
Name of class
OK
Back

FIG. 35

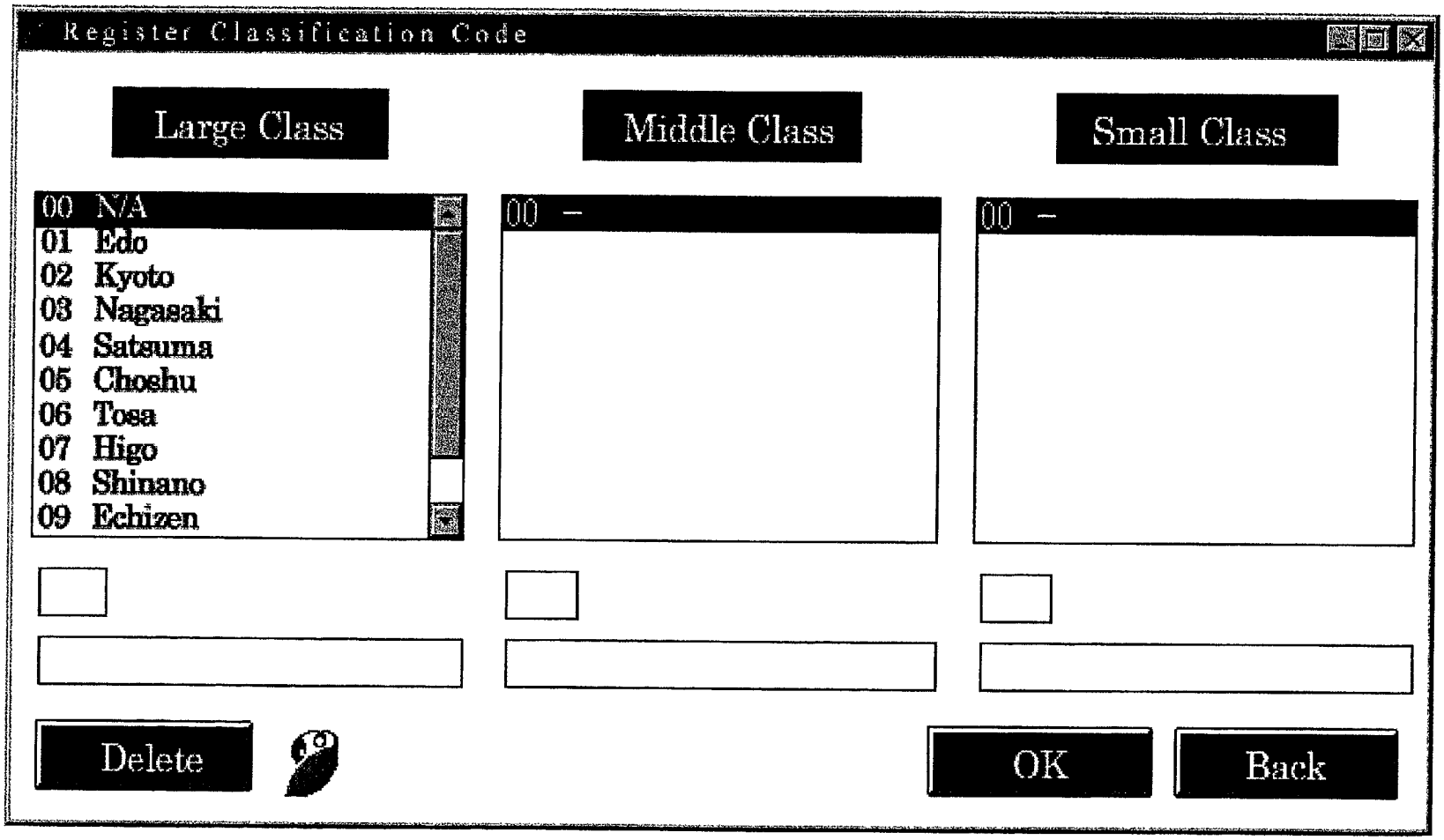

Register Classification Code
Large Class
Middle Class
Small Class
00 N/A
01 Edo
02 Kyoto
03 Nagasaki
04 Satsuma
05 Choshu
06 Tosa
07 Higo
08 Shinano
09 Echizen
00 –
00 –
Delete
OK
Back

FIG. 36

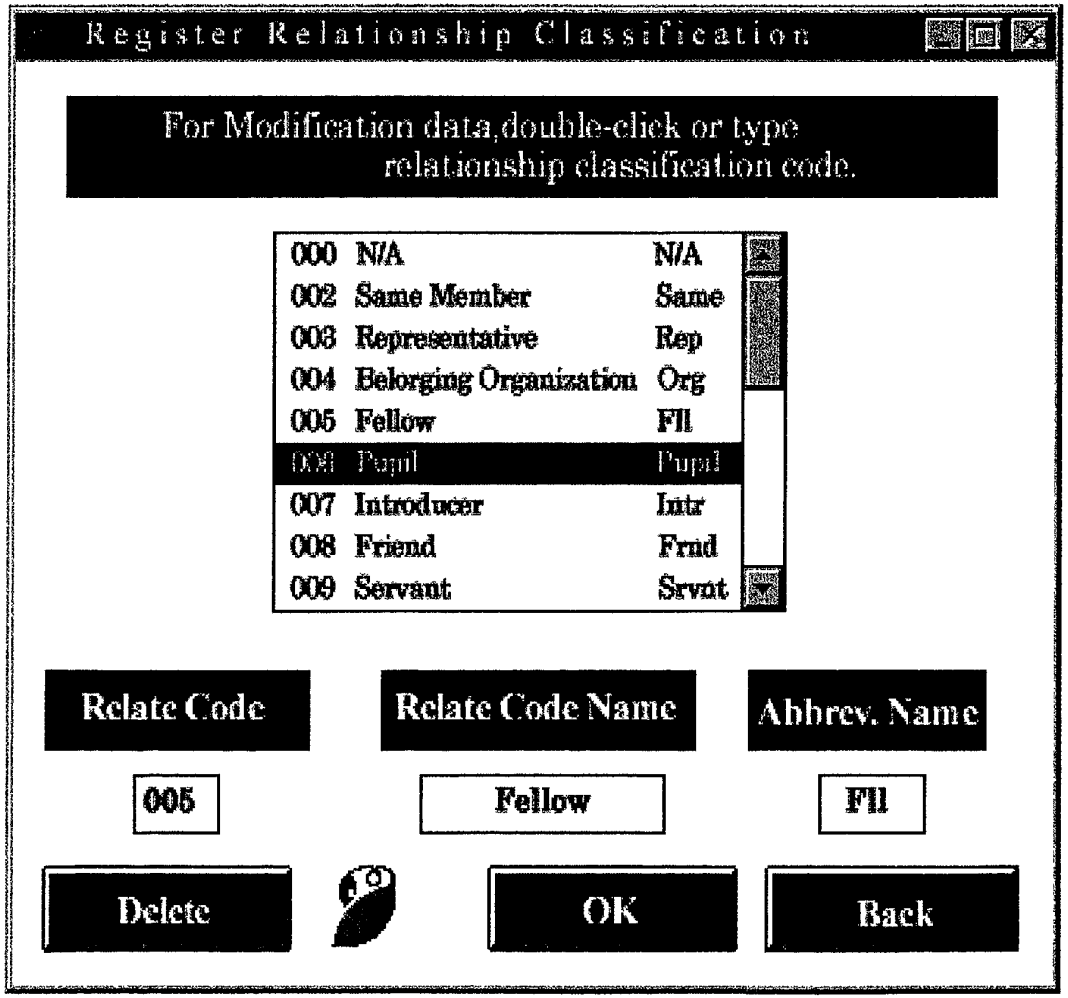

Register Relationship Classification
For Modification data,double-click or type relationship classification code.
000 N/A N/A
002 Same Member Same
003 Representative Rep
004 Belorging Organization Org
005 Fellow Fll
006 Pupil Pupil
007 Introducer Intr
008 Friend Frnd
009 Servant Srvnt
Relate Code
Relate Code Name
Abbrev. Name
005
Fellow
Fll
Delete
OK
Back

FIG. 37

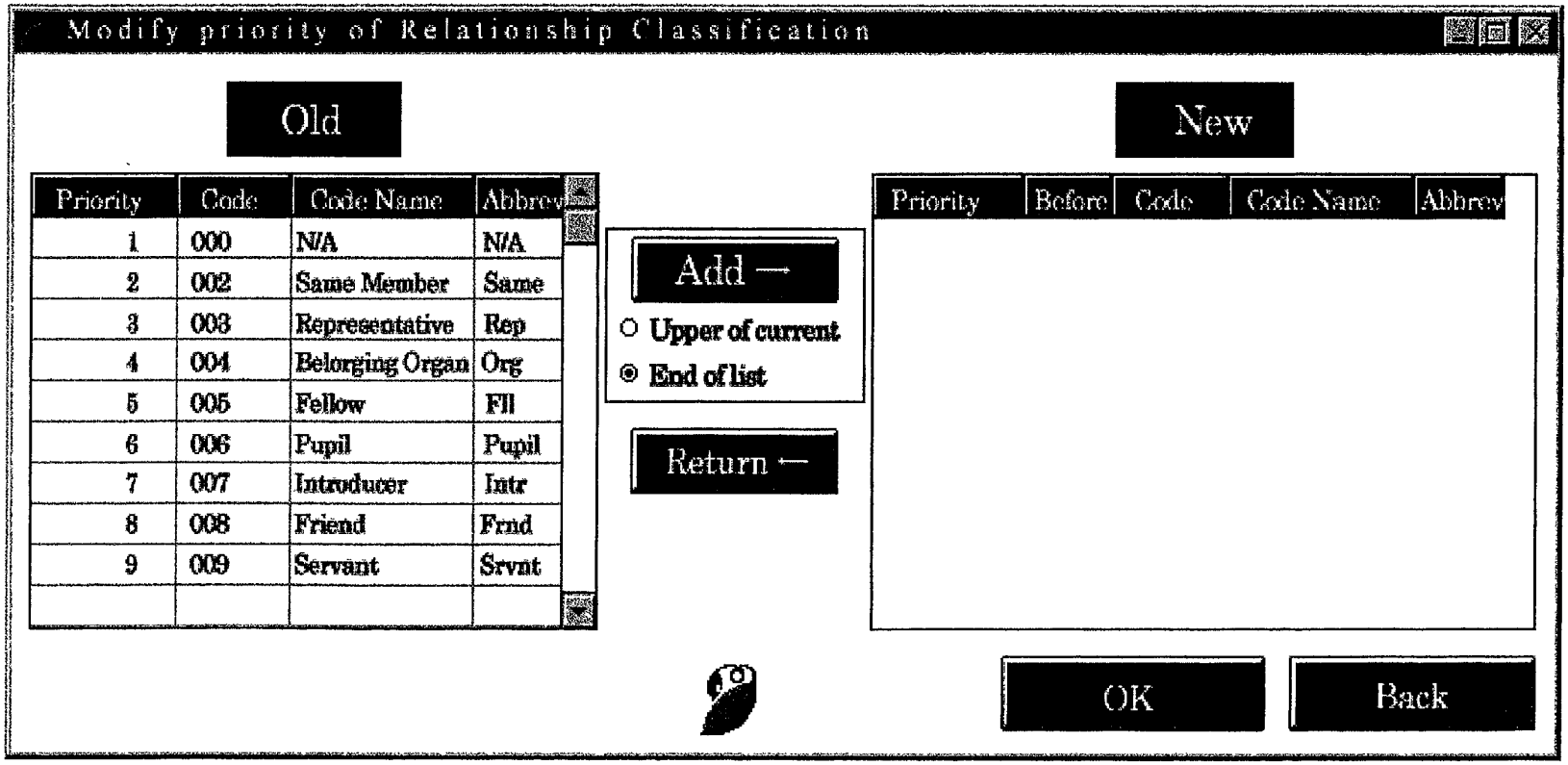

Modify priority of Relationship Classification
Old
New
Priority
Code
Code Name
Abbrev
1 000 N/A N/A
2 002 Same Member Same
3 003 Representative Rep
4 004 Belonging Organ Org
5 005 Fellow Fll
6 006 Pupil Pupil
7 007 Introducer Intr
8 008 Friend Frnd
9 009 Servant Srvnt
Add →
Upper of current
End of list
Return ←
Priority
Before
Code
Code Name
Abbrev
OK
Back

FIG. 38

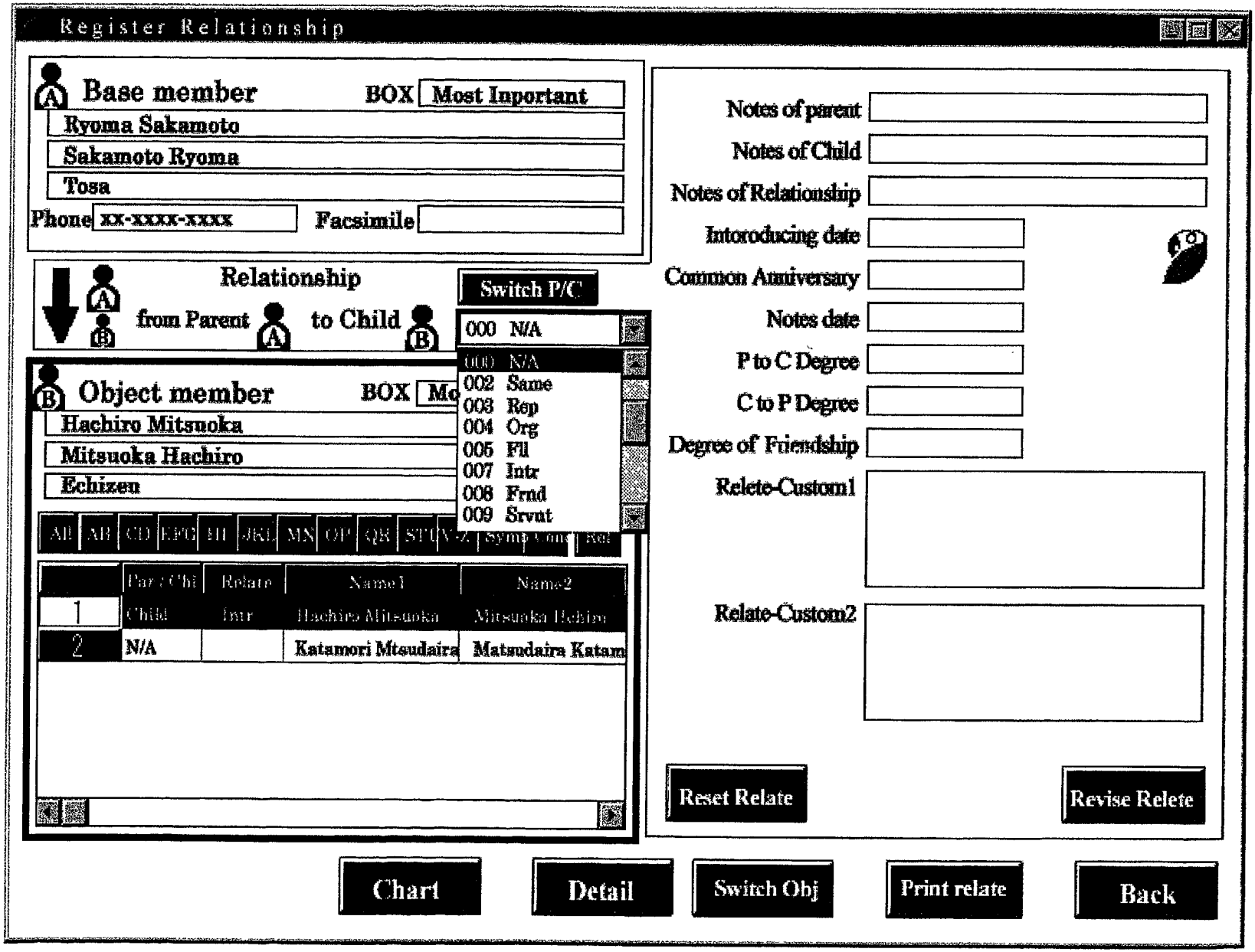

Register Relationship
Base member
BOX
Most Important
Ryoma Sakamoto
Sakamoto Ryoma
Tosa
Phone
xx-xxxx-xxxx
Facsimile
Relationship
from Parent
to Child
Switch P/C
000 N/A
000 N/A
002 Same
003 Rep
004 Org
005 Fil
007 Intr
008 Frnd
009 Srvnt
Object member
BOX
Hachiro Mitsuoka
Mitsuoka Hachiro
Echizen
AE
AB
CD
FFG
HI
JKL
MN
OP
QR
STU
Par : Chi
Relate
Name1
Name2
1
Child
Intr
Hachiro Mitsuoka
2
N/A
Katamori Mtsudaira
Matsudaira Katam
Notes of parent
Notes of Child
Notes of Relationship
Intoroducing date
Common Anniversary
Notes date
P to C Degree
C to P Degree
Degree of Friendship
Relete-Custom1
Relate-Custom2
Reset Relate
Revise Relete
Chart
Detail
Switch Obj
Print relate
Back

FIG. 39

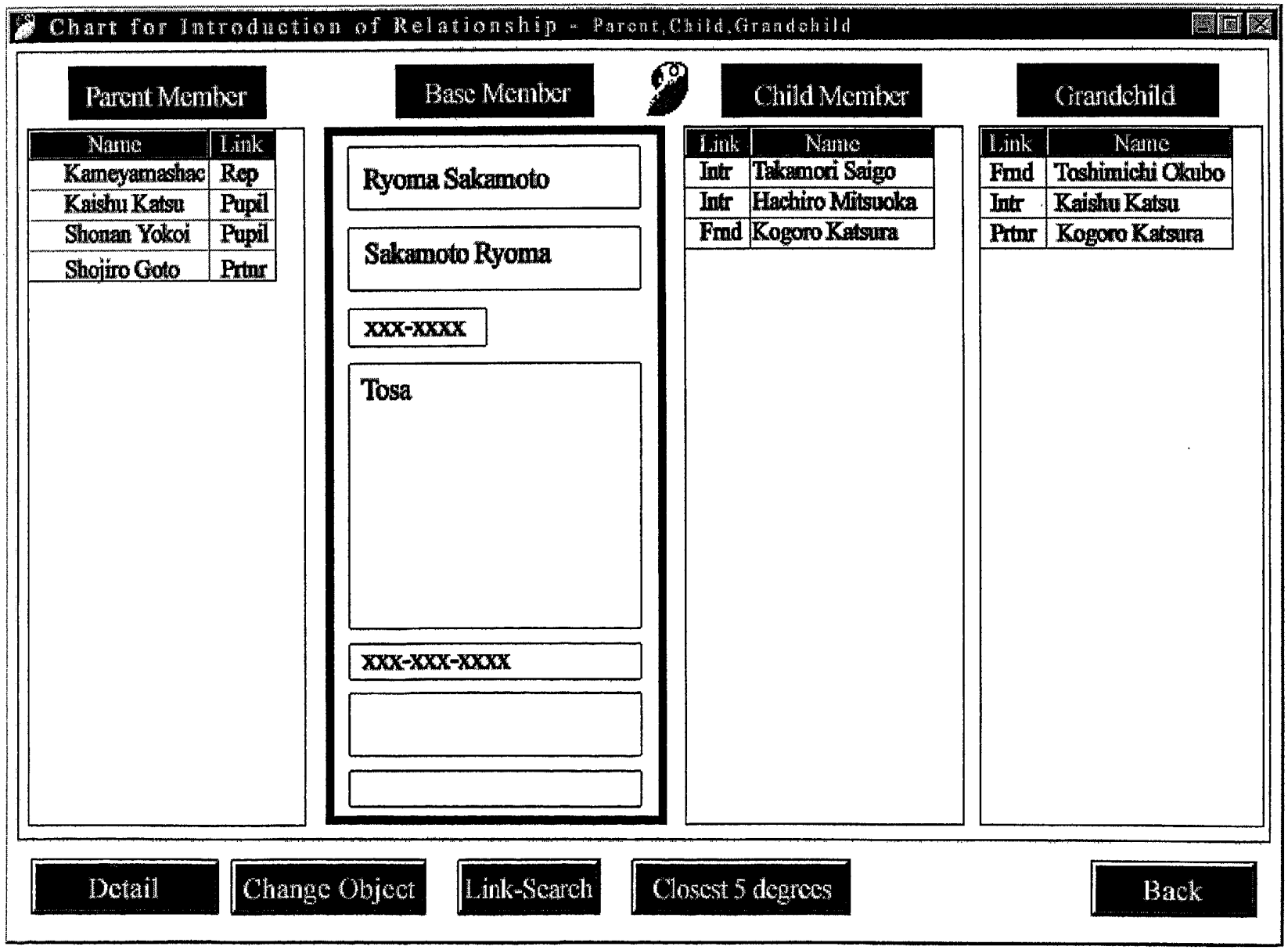


Chart for Introduction of Relationship - Parent,Child,Grandchild
Parent Member
Base Member
Child Member
Grandchild
Name
Link
Kameyamashac
Rep
Kaishu Katsu
Pupil
Shonan Yokoi
Pupil
Shojiro Goto
Prtnr
Ryoma Sakamoto
Sakamoto Ryoma
xxx-xxxx
Tosa
xxx-xxx-xxxx
Link
Name
Intr
Takamori Saigo
Intr
Hachiro Mitsuoka
Fmd
Kogoro Katsura
Link
Name
Fmd
Toshimichi Okubo
Intr
Kaishu Katsu
Prtnr
Kogoro Katsura
Detail
Change Object
Link-Search
Closest 5 degrees
Back

FIG. 40

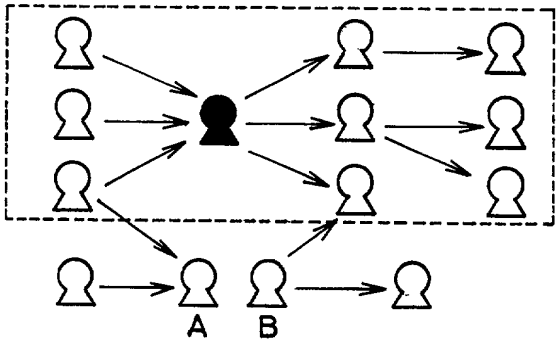

A
B

FIG. 41

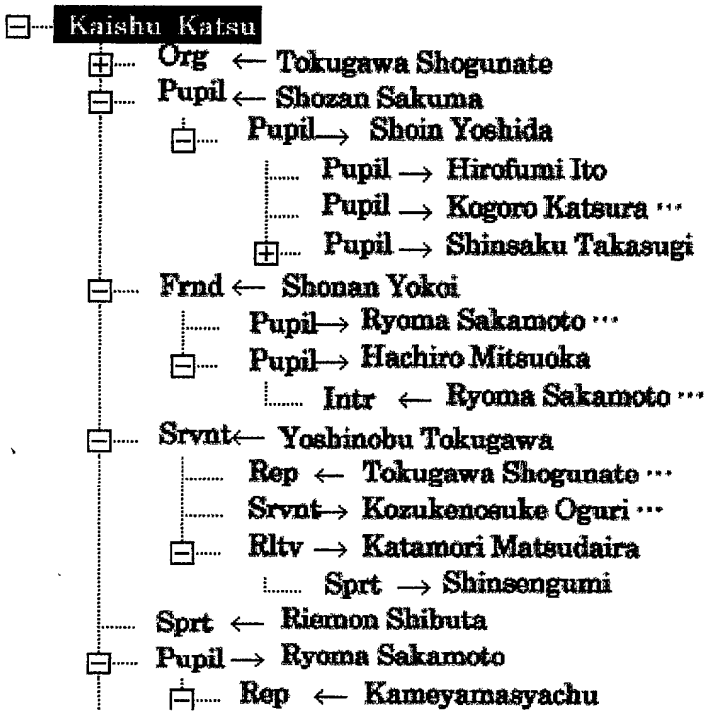

Kaishu Katsu
Org ← Tokugawa Shogunate
Pupil ← Shozan Sakuma
Pupil → Shoin Yoshida
Pupil → Hirofumi Ito
Pupil → Kogoro Katsura ···
Pupil → Shinsaku Takasugi
Frnd ← Shonan Yokoi
Pupil → Ryoma Sakamoto ···
Pupil → Hachiro Mitsuoka
Intr ← Ryoma Sakamoto ···
Srvnt ← Yoshinobu Tokugawa
Rep ← Tokugawa Shogunate ···
Srvnt → Kozukenosuke Oguri ···
Rltv → Katamori Matsudaira
Sprt → Shinsengumi
Sprt ← Riemon Shibuta
Pupil → Ryoma Sakamoto
Rep ← Kameyamasyachu

FIG. 43

Relationship management table (KKT)

ID	Parent	Child	Relationship classification
1	A	B	XXX
2	A	C	XXX
3	B	C	XXX
4	C	D	XXX
5	D	A	XXX

There may be arbitrary additional formation

Relationship vector table (KVT)

ID	Origin	Destination	Relationship classification	Time	Position	.....	Differentiation	KKT-ID
1	A	C	XXX	XXX	XXX	XXX	XXX	2
2	A	C	XXX	XXX	XXX	XXX	XXX	2
3	C	A	XXX	XXX	XXX	XXX	XXX	2
4	B	C	XXX	XXX	XXX	XXX	XXX	3
5	B	C	XXX	XXX	XXX	XXX	XXX	3
6	C	B	XXX	XXX	XXX	XXX	XXX	3
7	C	B	XXX	XXX	XXX	XXX	XXX	3
8	C	B	XXX	XXX	XXX	XXX	XXX	3
9	A	D	XXX	XXX	XXX	XXX	XXX	5
10	A	D	XXX	XXX	XXX	XXX	XXX	5

Arbitrary additional information

FIG. 44

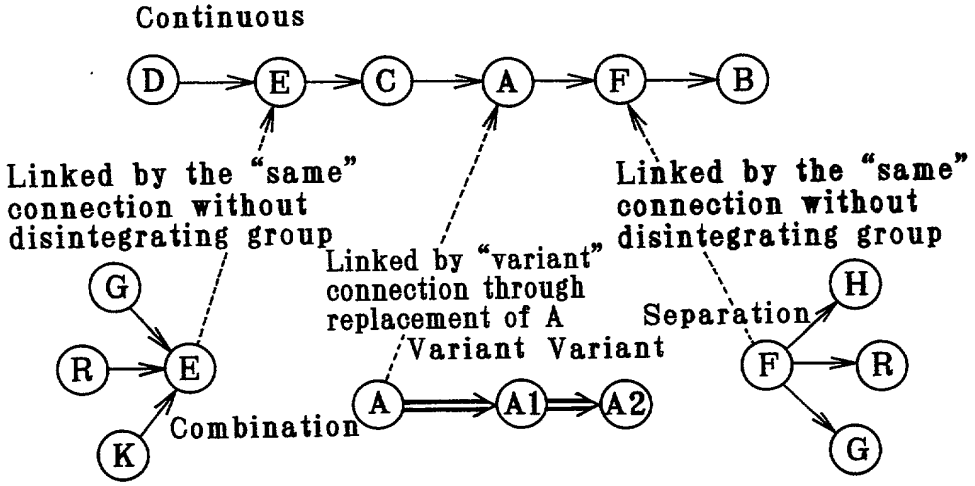

Continuous
D
E
C
A
F
B
Linked by the "same" connection without disintegrating group
Linked by the "same" connection without disintegrating group
Linked by "variant" connection through replacement of A
Variant Variant
Separation
G
R
E
K
Combination
A
A1
A2
H
F
R
G

FIG. 45

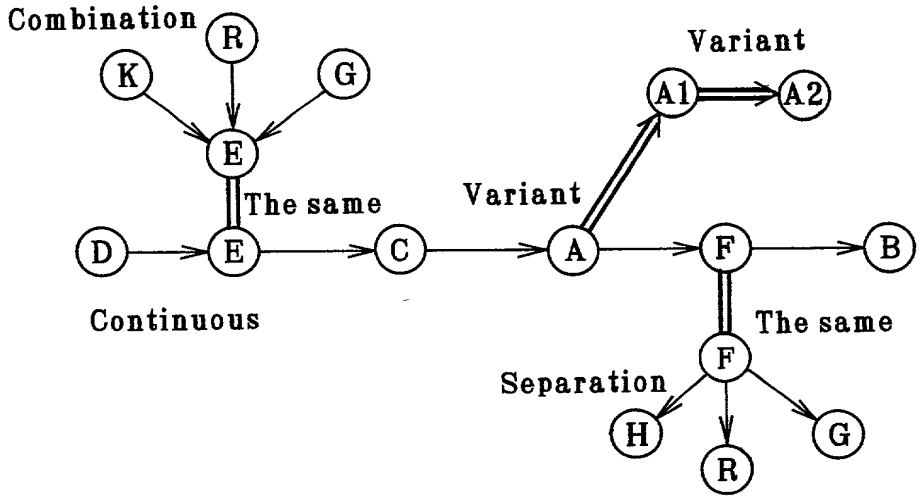

Combination
R
K
G
E
The same
D
E
C
A
F
B
Continuous
Variant
A1
A2
Variant
The same
F
Separation
H
G
R

FIG. 46

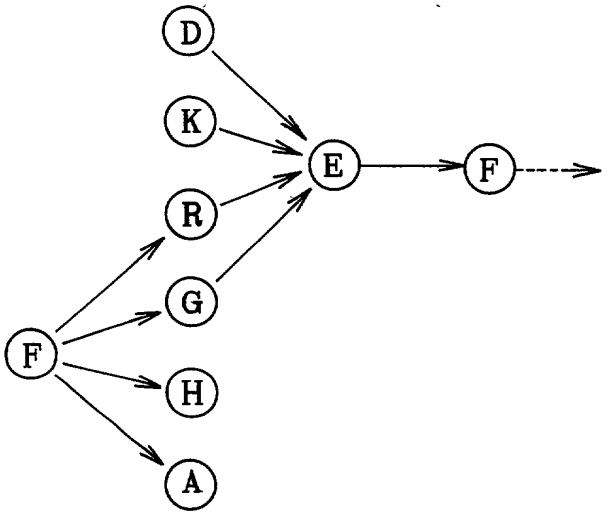
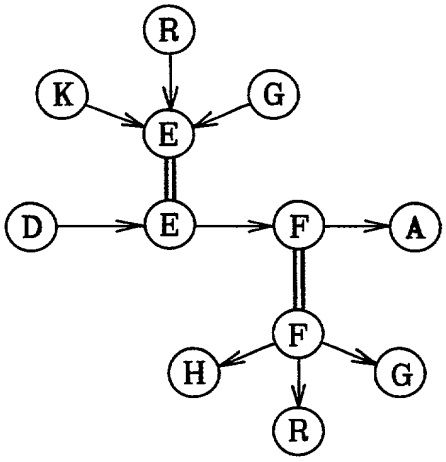



FIG. 47